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ORNAMENTAL ART AND SYMBOLISM: ACTIVATORS OF HISTORICAL REGENERATION FOR KAZAKHSTAN'S LANDSCAPE ARCHITECTURE

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Abstract

The use of symbolism in contemporary architecture is increasingly gaining momentum, especially so in the Eastern countries currently undergoing rapid economic development. Sociologically, this phenomenon can be related to a desire to manifest a vast wealth of national art and respond to the globalisation and unification of world culture. Taking this tendency as a prompt, this study explores different ways of implementing symbolic ornaments in landscape architecture. Traditionally architecture has been defined through and judged against culturally acceptable criteria that set the norm for appropriate form and expression. Yet, technical advances have altered this process and contributed to a certain level of oblivion of traditional architectural form. Thus, the meaning of many Kazakh ornaments has been lost through time. On one hand, this paper collects historical information on the semiotics of Kazakh ornaments and on the other hand, it conducts field studies focusing on the cultural tradition of the native people in Eurasia. The study introduces the use of symbolism in landscape architecture as an aspiration for luck and prosperity which then dictates the quality of the landscape compositions. The findings show that the use of symbolic ornamentation in architecture is not bound to specific geographic areas but rather motivated by broader underlying principles. Through analytical exploration of different cultures and their use of symbols in architecture, this study identifies four main categories of architectural symbolism relating to floral, zoomorphic, geometric and cosmogonic patterns. Each nation then recognises its own identity in the semiotics of those patterns and incorporates them in the urban realm as part of its cultural legacy.

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INTRODUCTION

Decorative ornamentation has played an important role in shaping the culture, national identity and tradition of many countries such as China, Japan, Saudi Arabia, Turkey and Iran which are currently undergoing rapid economic development (Hay, 2010, Utaberta, Mamamni et al., 2012). Consequently, as a counterpoise of global unification, those nations continue to foster a tendency towards reviving the ornamental art tradition in the present day.

Research investigating the underpinning factors of the revival of indigenous art forms points toward a need for cultural self-identification in the face of globalisation as one of the main driving forces of this phenomenon (Blum, 2007; Shishin, 2014). The city of Isparta, Turkey tells a cautionary tale about the impact of political and economic decisions on the urban identity of a historically rich settlement where the influence of modern urban planning has deprived it of the essence of its historic identity (Beyhan and Gürkan, 2015). It is important to note that cities in nations undergoing economic and political transformations are particularly vulnerable to political decisions that give little consideration to local traditions under the pressure for global unification. Globalisation is often synonymous with modernisation in the sense that international trade and communication bring forth new technologies which interact with and influence local traditions. These new technologies can be employed in, and adapted to, traditional pattern construction but at the same time, they can blur the line between traditional art making and modern mass production. Furthermore, modernism might be considered as a metaphorical watershed which has ruptured the symbiotic relationship between architecture and art thus chastising ornamentation nearly as a crime (Mitrache, 2012). On a sadly poetic note, a parallel can almost be drawn between the condemnation of ornaments and the extinction of wildflowers which gradually lead to an imbalance in nature or even corruption of deontological values. Notwithstanding that criticism of traditional patterns, ornamental art has managed to retain certain influence on landscape architecture and design in the modern world. Even natural solid entities such as landscapes are being redefined under the ever-increasing pressure imposed by globalisation and driven by social, economic and political influence (Brabec, 2004).



Figure 1. "Palm Tree" ornament in the landscape architecture of the international entertainment complex in Dubai - master plan (Source: Google Maps, 2017).

The artificial palm islands in Dubai created in 2003 are an example of a modern megaproject where traditional ornamental pattern is incorporated in contemporary design. For various political and economic factors, towards the end of the 20th century and the beginning of 21st century, Dubai set out to establish itself as a global centre. In order to achieve that, massive infrastructural projects were carried out so as to enable global trading and communication (Elsheshtawy, 2004). Latest methods of theoretical design were employed in the attempt to tackle climatic and geographic challenges (Hellebrand, Fernandez et al., 2004). The result was a vast cultural and entertainment complex in the physical form of a tree ornament. Along with other architectural and infrastructural achievements, the shape of the palm tree islands has become the landmark of Dubai and is recognised across the whole world. Furthermore, floral patterns have been increasingly gathering attention. For instance, at the flower exhibition in Chelsea, London in 2004 an initiative led by the Prince of Wales resulted in a garden carpet design based on oriental floral art which then became the main object of interest at the exhibition (Clark, 2011).

Another example of floral patterns in contemporary culture is the official motif of the Beijing Olympic Games in 2008 – the “Clouds of Fortune”. The swirls of the design pattern were incorporated in the landscape of the central stadium as well as in the opening intro videos of the games. Experts of oriental art would recognise the symbolic value of the pattern as a wish for good luck and fortune. Economically developing countries put a great emphasis on their cultural heritage which is often expressed in the form of gardens and parks articulated through the means of symbolic ornamentation thus seeking the attention of tourists and promoting their national traditions.

RESEARCH METHOD

The main research question of this paper is: What is the relationship between the symbolism of ornamental art and landscape architecture design? As we stand, there is certain evidence that symbols of the ornamental arts have been the inspiration for landscape architecture. Hence, this study explores the approaches and methods used in the process of landscape design in Eurasian countries and specifically in Kazakhstan. The primary method used in this investigation is fundamental research which relies on theoretical analysis and interpretation of historical resources. Additional information for the research is gathered through field studies. The conclusion of the paper is reached through qualitative analysis.

Given that the countries along the Silk Road in Eurasia developed economically at about the same time and share similar cultural traditions, they have mutually influenced each other in this process and therefore foster similar contemporary tendencies. Kazakhstan serves as a case study of the symbolic value of ethnographic ornamentation and its influence on landscape architecture. It is located at an important intersection on the Silk Road. It is immediately bordered by China to the west and Russia to the east, and therefore sits on the route from Japan and Korea to Europe in the east-west direction. In the north-south direction, bordered by Russia to the north and Kyrgyzstan and Uzbekistan to the south, Kazakhstan is at the heart of the routes from Turkey, Iran and India to Russia. Sharing common culture and level of economic progress, these countries have developed their ornamental arts in a similar way. This tradition has been then translated into the landscape architecture of Eurasia and particularly in Kazakhstan. National Kazakh ornaments have heavily influenced the evolution of landscape architecture in Kazakhstan. Ornamentation is also an intrinsic part of Kazakhstan, almost becoming its trade mark, reflected in its national flag, land and currency.



LITERATURE REVIEW

In terms of scientific classification, Kazakh ornamental motifs are divided into four different categories: floral (trees and flowers), zoomorphic (stylised images of animal form), geometric (hexahedrons and octahedrons) and cosmogonic (stars, moons, etc) (Mazhitayeva, Kappasova et al., 2015; Soltanbayeva; 2013, Trilling; 2003).

The symbolic value of folk ornaments needs to be analysed in order to determine their aesthetic and emotional influence on architecture, and in particular in landscape design. In modern day, Kazakh national ornamentation is at a high risk of being forgotten due to the growing pressure of globalisation.

This study seeks to uncover the symbolic meaning of the distinctive national ornamentation of the Kazakh culture which has been, to a certain level, lost in translation over the years. The ethnographer and founder of the archaeological science of Kazakhstan A. Kh. Margulan has spoken on the subject of misinterpreted meaning of national ornamentation and the necessity to research and reveal the lost symbolism (Margulan, 1986). Margulan, a recognized figure of authority in Kazakh history and culture, whose scientific knowledge is compiled in 10 volumes, passionately urges next generations to unearth the forgotten value of Kazakh ornamentation.

Through an extensive analysis of the literary works of A. Margulan, T. Basenov, U. Zhanibekov, K. braeva, G. Ilyayev, U. Abdigapparova and other experts on ornamental art and tradition, this study has collected and categorised the elements of ornamental art. Additionally, taking into consideration previous studies conducted by B. Gludinov, B. Ibraev, A. Uralov, B. Shakirbaev, M. Imanov, A. Kvasov, the meaning of ornamental patterns is classified as follows:

Table 1: Classification of Kazakh ornaments (Source: Authors, 2017).

Category	Aspirational Character
Floral	Symbols of luck and prosperity
Zoomorphic	Symbols of success (literally quantitative growth of livestock and population)
Geometric	Aspirational wishes for self-improvement in keeping with the laws of geometric harmony
Cosmogonic	The proportionality of life in harmony with the cosmos

Symbolism and ornamentation are typical in the art of the ancient nomads (Bunker, Watt et al., 2002; Melehova, 2014; Shishin, 2014; Stark, Robinson et al., 2012). This tradition then sets a further inclination towards the use of ethnic themes in regional landscape architecture where cultural reiteration is also often recommended in design guides (Kozbagarova, 2010). The nomadic life of the ancients inevitably involved long journeys of hundreds of kilometres in search of suitable pastures for the cattle as well as shelter from climatic adversity. Consequently, as a form of emotional reassurance in the face of harsh natural conditions, special significance was attributed to symbols of luck and good wishes.

Listed below is the symbolic meaning of several ornaments:



The floral ornament

It is primarily represented by a tree in Eurasian folklore and mythology. The symbol of the tree, as per ethnic belief, is meant as a wish for prosperous growth of the generation. For example, the Baiterek tree (lit. mighty poplar) was a generic sign and the symbol of the Kangly (Kankali) tribe, which played an important role in the ethnogenesis of the Turks, Kazakhs and Uzbeks. A contemporary use of the symbol of the Baiterek tree in landscape and architecture is evident in the development of Astana, Kazakhstan's capital where the incorporation of this symbolic meaning was deemed necessary as an expression of ethnic culture.



Figure 2. "Baiterek" Tree is the symbol of the capital of Kazakhstan - Astana (Source: Yandex.ru, 2017).

Floral and zoomorphic ornaments are also used in decorating national headdresses (Bunker, Watt et al., 2002). For example, skullcaps of Kazakhs and Uzbeks often incorporate plant seeds as an aspirational wish for successful growth of the offspring (Margulan, 1986). Floral motifs and stylised elements of plants also appear in other eastern cultures. There is a legend which says that the Chinese philosopher Confucius was born under a sacred tree. It is also known that the Romans have worshiped the sacred tree of Romulus. There is also a tree in Sham, Syria, near Busra, along the Silk Road, which up until this day is considered sacred as the Prophet Muhammad is said to have occasionally rested under its shady crown on trade journeys in his youth.

In Estonia, in the area near the creek in Tulivere, there is a sacred oak tree. According to the beliefs of Estonians, this sacred oak ensures that people receive bountiful harvest and healthy cattle. In the tree itself there is a small opening which is essentially an archway entrance to the core of the tree and can accommodate two people. Estonians consider this little space as a place for reconciliation; thus, the tree is often referred to as the oak of reconciliation.

The zoomorphic ornament

It is most commonly associated with the depiction of animals on rupestrian petroglyphs of the Türks and on objects of the applied decorative arts. The active element of this ornament – *koshkar muiz* (sacred sheep), was widely used in the history of the arts of ancient Turkic people. The entrance area of the cultural and entertainment complex “Manas of Ail” in Bishkek, Kyrgyzstan is a contemporary example of the use of this symbol in landscape architecture. The architectural unity of the square is articulated though a composition of zoomorphic ornaments.



Figure 3. The symbolic ornaments of the architectural and landscape complex “Manas of Ail” in Bishkek, Kyrgyzstan (Source: VarandeyGuide, 2017).

For the people of the Middle East, as for the entire Muslim world, the image of the sheep signifies the leader of the herd and is thus considered a symbol of power and wealth. The cornucopia (lat. *cornu copiae*, horn of plenty) is also a symbol of abundance and wealth, dating back to ancient Greek mythology.

There are different expressions used in everyday speech referring to the cornucopia as an epitome of extraordinary generosity and abundance. The Romans brought sheep as a sacrifice not only on the altars, but also as a wish for children for young couples. In the Bible, the sheep represents the whole congregation of well-intentioned believers, and Jesus Christ as their shepherd.

Sheep breeding has also been a profitable business throughout times. For example, in the 16th century in England the export of sheep's wool brought such profits that it was unanimously recognised as a precious product for the whole kingdom. From then on, a sack full of sheep's wool was considered a symbol of wealth in England.

The zoomorphic ornament *khus muryn* which literally means “bird's beak” is very popular in Kazakhstan and was widely used in traditional jewellery. For the Kazakhs “khus muryn” is a harbinger of good news. In the Kazakh legends, birds bring good news from distant lands about the well-being of close relatives.

Doves also hold a special position in the cultural tradition of the people in Eurasia. The dove is often interpreted as a symbol of God's mercy as it was the dove that let Noah out of the ark after the flood and helped him find the land. The dove returned to the ark with clay on its feet thus suggesting the proximity of dry land and signalling that God had cleared the land and forgiven men.

Ancient culture greatly honours doves as well; the emblem of Athens is a dove with an olive branch. For the Romans, it was a symbol of love, dedicated to the goddess Venus. In Chinese culture, the image of the dove is a sign of loyalty, a sign of respect for elders, as well as a sign of longevity and peace. In Japan, the dove heralds the end of the war. The Prophet Muhammad, peace be upon him, also received divine revelations through a dove that sat on his shoulder. This ancient cultural symbolism has been carried on to present day. The emblem of the first World Congress of Peace Supporters held in 1949 in Paris and in Prague was drawn by the artist Pablo Picasso and it depicts a white dove, carrying an olive branch in its beak. There is clearly a continuous tradition to use the dove as a symbol of benevolent intentions and peace.

In Kazakh culture there is also another zoomorphic symbol that signifies health and long life – the stylised image of a turtle represented as a continuous smooth knot, consisting of four loops (Abdigapparova, 1999). In Feng shui the turtle means not only longevity and health, but is also a symbol of endless patience, wisdom and diligence, which always bear fruit. According to the Chinese legend, the doctrine of Feng shui was introduced by the turtle, so the followers of this doctrine treat it with great respect.

The geometric ornament

Its symbolic meaning was widely used in the architecture of Kazakhstan and Central Asia. For example, the typical dwelling of the Kazakhs – the yurt – is based on a round shape.

Geometric ornamentation offers a visually comprehensive representation of complex mathematical concepts and a rational explanation of the surrounding world. This ornamental type includes a series of geometric motifs, consisting of simple geometric figures like circles, squares and polygons. These individual figures united as per the creative intentions of artists form complicated compositions. Geometric ornaments in Kazakhstan and Central Asia are common in ancient geoglyphs, petroglyphs and in ceramic art. These geometric figures are also used in carpet weaving and jewellery and have a symbolic meaning.

Ancient settlements in Kazakhstan had both round and square shapes, the sides of which were oriented towards the directions of the world (Ibrayeva, 1994). This signifies the equilibrium of the urban structure and the intent for equal cooperation with other cities. In South Kazakhstan, the name of the historic city of Taraz comes from the word equilibrium and means the “scales”.

The square is the basis for building architectural compositions. The octagon, as the derivative of a displaced square, represented the need for improvement according to the



laws of nature. This is confirmed by the number of boulders in the so-called stone gardens of ancient Turks in Kyrgyzstan (Nasredinova, 2007). Later, in the landscape architecture of the Taj Mahal, built by the descendants of Babur, the octahedrons were actively used as symbols of self-improvement to achieve a harmony with the environment and with the cosmos. Geometric ornaments from three thousand years ago are found in petroglyphs and in stone sculptures of modern Greece, Iran, Iraq and Turkey. Geometric forms were also revered in Japan and among American Indians.

The cosmogonic ornament

Philosophical expression through ornamental art is also part of the ancient traditions. The ancient ancestors of the Kazakhs represented the laws of nature in the form of symbolic ornaments which were then further manifested into the landscape architecture. In the fields of planning and architecture, there are examples of the use of symbolism in urban planning. The general plan of the city of Brasilia is in the form of a symbolic ornament - a bird. The clear readability of the symbol has contributed to the popularity of the city throughout the world. Consequently, this master plan in the shape of bird with unfolding wings has become an aspiration for a brighter future and has inspired many Brazilians.

In the modern landscape architecture of Kazakhstan, there are also examples of successful use of ornamental symbols. For instance, the basis of the general plan of the ethno-park in Astana is the petroglyph of the sun-headed man from the Tamgaly tract. The symbolism of the general plan is also intended as a force of inspiration for the people of Kazakhstan. The landscaping solution for the park was designed as an informative tour of Kazakhstan's history, beginning from ancient times up until present time, concentrated in one entity on the same territory. From bird's eye view, the ethnographic complex "Aray" appears to be following the silhouette of the "sun man" petroglyph (drawing from Tamgaly area). The park is divided into seven sectors where the main alleys cover certain historical periods and prominent figures who have influenced the culture development, formation and great history of the nomads. The park was designed by architect Sh. Mataibekov and R. Aubakirov and it was built and inaugurated in 2006 (Mataibekov, 2010). The petroglyph remains at the very heart of the general layout of the park as a symbolic wish for further development and prosperity of the Aray Park.

It should be emphasised that elaborating the general layout of a park with symbolic value requires special attention to the soil condition and ecological environment. In the arid areas of Kazakhstan, there are three types of ecosystems:

- clay (takyr) ecosystems: formed on silt drifts of Syr Darya, Amudarya and other small rivers with moderate phytomass (5-8t/ha), which have a large arable potential;
- desert (sand) ecosystems: with sufficient phytomass (several tens of tons/ha), especially in developed historical areas;
- riverine (tugai) ecosystems: formed in valleys and lower reaches of rivers with rich phytomass (300 tons/ha) and wildlife. Hence, tugai ecosystems in the lowlands of rivers and valleys are very convenient for the construction of gardens and parks (Yussupov, 1985).



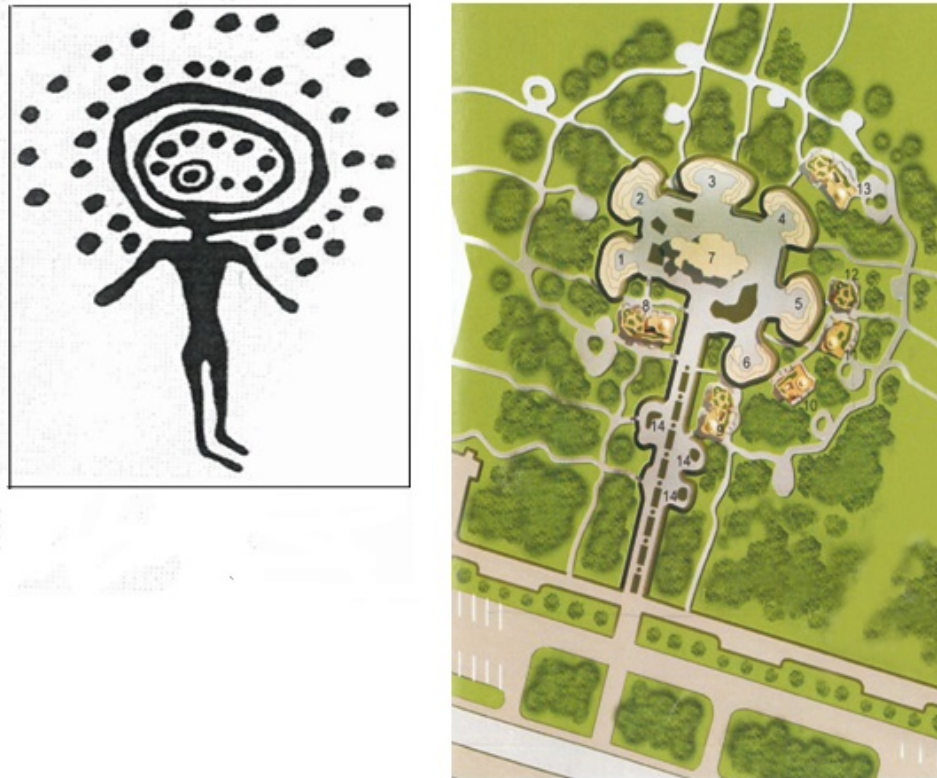


Figure 4. Symbols and general layout of the ethnographic park
“Aray” in Astana (Source: Mataibekov, 2010: 20).

It is also important to pay attention to the toponyms of the localities, especially those related to the names of the springs, wells and lakes in the pastures. There are many examples of those geographical features in the region - Zhailau kol (lake on pasture), Uchkuduk (three wells) and Akbulak (white spring). Along the Silk Road, there are also dome underground reservoirs (sardoba) which used the wastewaters (Baipakov, 2007). The principle of these “sardobas” could be retained and incorporated in ethnographic parks adding a special flavour and tribute to the national heritage. These objects might not actually be preserved in their physical form but they have nonetheless remained part of the national memory and folklore. They are often mentioned in songs and treasured as part of the wealth of the native land, thus becoming an important target for restoration.

Given the geographic and climatic conditions of Kazakhstan and Central Asia, gardens and parks can be incorporated along the irrigation canals. Water devices such as the “*chigir*” can then be used as an accentuating element of the panoramic view of the parks and gardens. The “*chigir*” is a water-lifting instrument in the form of a wheel with buckets or a drum with rope, equipped with scoops. Coolness, water splashes and trickling sounds from the scoops in the narrow channels can then potentially attract the attention of visitors. It is necessary to design a *chigir* device that is both operational and aesthetically pleasing so as ensure the irrigation of plants and flowers in those landscape complexes. This traditional element can contribute to the overall master plan and functionality of the parks in Kazakhstan and Central Asia giving them their own regional features.

CASE STUDY

Design of alleys and squares with symbolic meaning

Symbolic alleys typically begin with entrance arches which are widely used in architecture as well. Immediately after going through the arch, as it were in ancient times, another space opens, a new world. Visitors would pass through the arches of Eastern cities, palaces, gardens and parks, and cross over the other side amazed with the unfolding procession of spaces. The ethnic symbols of a tree, cornucopia, star and good news play an important role in the use of arches; they implicitly disperse positive information upon the visitor. The observer gradually passes through the arch-separated information spaces, which are, nonetheless, united by a single script according to the cultural tradition of the ethnos.

This scenario unfolds in an equally understandable manner both for the locals and for the tourists; the symbols of luck, good news and intentions appear to be unanimous to all mankind. The confluence of nature and culture hold great potential for authentic place making. An urban alley, square or courtyard with symbolic meaning has the potential of becoming an attractive object within the cultural landscape of a city if skilful, yet dynamic use of symbolism is applied (Nezhad, Eshrati et al., 2015).

The following projects serves as an example of a landscape project which tries to incorporate symbolic meaning. The project is recognised as the best at the competition of innovative projects in Shymkent, Kazakhstan and recommended for construction near the South Kazakhstan State University. The alley consists of 5 small ornamental forms, arranged vertically and horizontally. The module of those small forms, defined though the proportion of the golden ratio, is 3.6m x 3.6m.

First element

The first module of the alley is a cube, with diagonal links, borrowed from the Turgai geoglyph in Kazakhstan, which is 14,000 years old. The geoglyphs of Kazakhstan in the Turgai steppe are of equal size and importance as the geoglyphs of the Nazca valley in Peru, which depict zoomorphic ornaments such as birds and spiders from bird's eye view. The geoglyph of the Turgai steppe is a square shape 280m x 280m in size. The vertices of the square are connected by diagonals and there are many interpretations of the symbolic value of the Turgai geoglyphs.



Figure 5. Aerial photo of a geoglyph in the Turgai steppe
(Source: Paranormal-news.ru, 2017).

In the case of this project, the cube and its diagonals signify the unity, balance and strong connection between family members and their well-being. A Kazakh proverb says that “if four family members are in the peace, they can reach great happiness in everything, and if six family members are in an argument, they can lose everything”. Diagonals represent the relationships in a family and its unity. Passing through the cube, visitors enter a space with hanging wooden bridge which swings as one moves along it.

Under the bridge there is a metaphorical container covered with glass which serves as a repository of all the negatives in society related to drug and alcohol abuse. The spectator figuratively crosses over social transgression and enters an ethnographic world of mutual respect and peace of mind.



Figure 6. General view of the alley with symbolic meaning (Source: Authors, 2017).

Second Element

The second element in the journey through the alley is an arch with the symbolic element “Agash” – a tree ornament. The tree, according to Kazakh beliefs, symbolises the growth of offspring and prosperity – an aspiration for development and success.

Third Element:

The third element of the alley is the ethnographic symbol – “*Koshkar muiz*”, literally meaning the “horns of the ram” and symbolising luck in Eurasian traditions.



Figure 7. The fragment of the alley (Source: Authors, 2017).

Fourth Element

The fourth element of the alley is the pattern “*Kus muryn*”, literally “bird's beak” signifying good news. As in ancient times, it was postal birds that brought news of the well-being of close relatives from far away.

Fifth Element

The concluding element of this architectural composition is the “*Tasbaka*” ornament (a turtle) positioned horizontally on the ground, an octagonal element signifying versatility. The shape of the turtle, according to cultural tradition, symbolises the longevity and good health not only among the Kazakhs, but also among the people of Southeast Asia. The turtle is a mosaic piece with a multi-coloured upper part. The top of the turtle-like form is articulated as a small stage suitable for art performances, speeches or just photography shoots. The backside is a vertical panel in the form of an open book. It is located above the turtle and according to ancient stone statues, symbolises the desire for knowledge. Behind the book, there is an ornamental pattern in the shape of a star which is an aspiration for mastery. The colours and materials correspond to the underlying meaning of each architectural form. For example, the geoglyph inspired cube uses the natural colour of the steppe with gentle green motifs.

DISCUSSION

The following *Figure 8* shows the visitors reaching the culmination of the journey. Having passed through the symbolic archways along the alley, they have become participants in the theatrical performance expressed through Kazakh symbolism. These same symbols can also be used in the landscape planning of flower gardens, squares and parks seeking to establish symbolic expression.

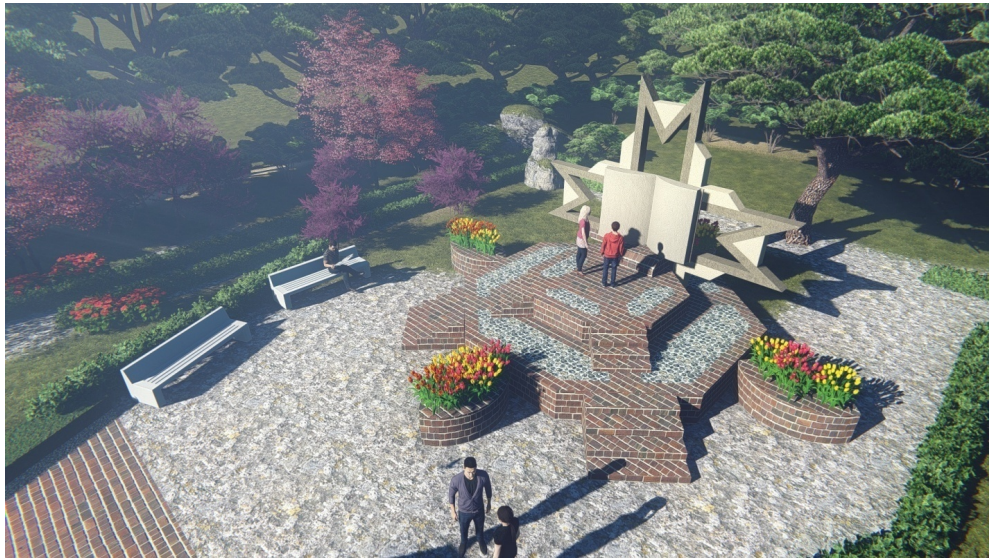


Figure 8. The last element of the alley – “Turtle”, as a symbol of health and longevity (Source: Authors, 2017).

Perfection of the composition of symbolic gardens and parks

Inspiration for articulating the architectural expression of individual features within landscape projects can be drawn from projects around the world, yet at the same time, sufficient attention needs to be paid to local traditions in order to prevent contradiction between innovation and custom.

In Feng shui, there is a strong emphasis on the use of smooth lines in the design of park alleys and garden paths; this fluidity is considered to relax people while sharpening their feelings at the same time and allowing them to communicate with nature. The planning of dry gardens is a relevant design issue under the challenging geographic and climatic conditions in Kazakhstan and Central Asia and therefore, precedents should be studied to gain insight into functioning methods of landscape resolution. At the same time, those solutions should not be blindly applied to the local environment without considerations of their impact on the cultural tradition.

Le Corbusier's Modulor, created to accommodate for human scale and based on the golden ratio, is a suitable reference that can be used in the process of sizing small scale landscape forms. The convenience of the Modulor's human scale principles facilitates the design of features such as flower beds, drinking fountains and landscape furniture. The adjusted dimensions of the Modulor seek to contribute to the achievement of integrity and refinement of architectural compositions which then play an important role in the final use of the spaces and the way users experience them.

Designing courtyards with symbolic value

Public buildings, university campuses and science parks often incorporate landscape features as interruptions of the built form, metaphorically giving those large developments some space to breathe. Often, symbolic characters, as a means to intensify uniqueness, can

be also identified in the layouts of those courtyards. Below is an example of a landscape proposal for a courtyard within the technopark of South Kazakhstan State University. The design concept is based around a spiral element in the centre which forms pedestrian paths and lawns.

At the heart of the spiral composition, there is a star-shaped decorative fountain “Temirkazyk” symbolising the scientific discoveries of the university and its aspirations for further innovation. “*Temirkazyk*” is the Kazakh name of the North Star (lat. *Alpha Ursae Minoris*) which is the only visible star from Earth that does not change its position on the horizon and was therefore a key celestial reference in ancient times.

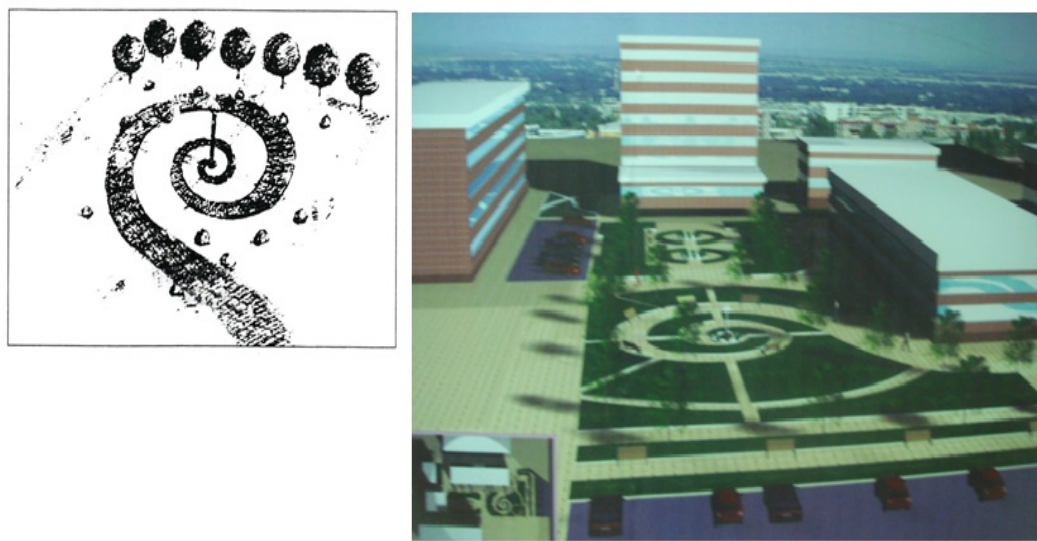


Figure 9. Symbols and general layout of the technopark of South Kazakhstan State University (Source: Authors, 2017).

The ancient Kazakhs used to explore the starry sky through a hole at the top of their yurts. This primeval form of an observatory allowed them to ponder the philosophical questions of the universe and create an interpretation of the universe in form of a spiral shaped map symbolising infinity. This map of the universe was published in the 19th century by the Kazakh natural scientist Chokan Valikhanov (Strelzova, 1990). In this courtyard proposal, inspired by the ancient spiral representation of the universe, boulders create the allusion of planets and stars. In small scale landscape propositions, their immediate architectural articulation has to be underpinned by the meta-theme of the whole park or campus.

Symbolic gardens, parks and courtyards can often be defined through smooth outlines, bends, curves and other ornamental patterns as seen in the case of the entertainment complex in Dubai shaped as a palm tree, or the petroglyph inspired park Aray in Astana. In order to fully determine the concept of a landscape proposal, it is necessary to clearly establish its purpose, boundaries and connections with the rest of the urban realm. A carefully selected range of symbols can yield public interest and turn the space into an urban activator. The design of each individual element of the park has to be carried out in keeping with the overall theme where preference is given to smooth forms replicating the relief of the natural landscape. At the same time, symbolism can be incorporated at the discretion of the

landscape designer and expressed through the means of ornamental elements such as the tortoise, cornucopia or geometric form reflecting natural tradition.

Design of small landscape forms, flower beds and arrangements

In historically developed avenues primarily defined by straight lines, flower gardens with symbolic ornaments can easily be integrated. For example, in order to introduce life and vitality into the wide avenues of a park, flower beds can be incorporated along their central axes in a certain sequence. Thus, small details in the landscape can significantly improve the urban experience of pedestrians. Flower beds typically blend into the surrounding landscape, yet they can also be used as symbolic accents, thus reinforcing the architectural expression of the urban realm.

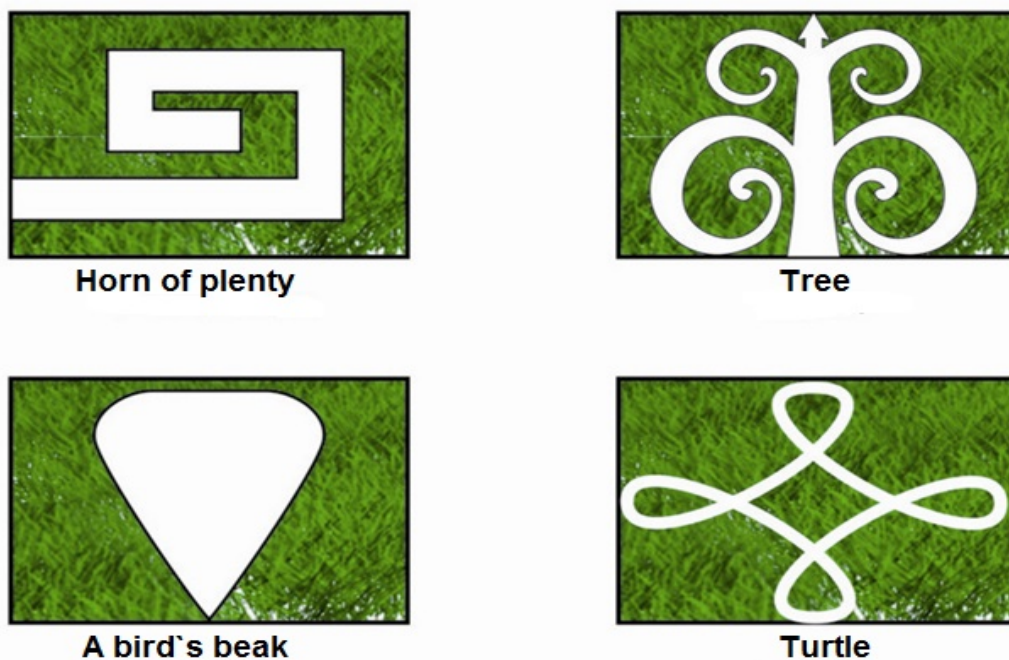


Figure 10. Modular symbolic ornaments for floral composition (Source: Authors, 2017).

Presented in *Figure 10* are a few modular compositions of symbolic meaning such as the tree of life, the cornucopia, the tortoise, and the bird's beak. Each of those can be integrated into a segment of the alley and create an ornamental journey for the passers. The size of the flower beds is determined by the width and length of the alley based on Le Corbusier's Modulor; the distance between the modules of the rhythmic composition is driven by the same principles. That being said, landscape designers also need to consider the specific terrain situation and adopt a suitable approach of ornamental design integration.

The individual floral arrangements can be subordinated to the general idea of the landscape development and become a creative vehicle for its symbolic language. Considering the small size and sophistication of these elements, they can be regarded as individual parts of a larger vocabulary that defines the alley. Each flower composition can be integrated at either the entrance or centre of the park, possibly in conjunction with water features such as

fountains. The idea of the whole composition is to create a linear journey through cultural semantics that guide the visitors on a pleasant day out.

THE ATTRACTIVE POWER OF SYMBOLIC PARKS

The increasing attention to ornaments in China is particularly interesting as symbolism there has even taken over everyday matters such as sales practices and popular culture. In the province of Henan, a rather creative street vendor has decided to take advantage of this cultural trend and implement it upon his own produce. He has carved into the watermelons the calligraphic hieroglyphs “fu” and “show” symbolising “happiness” and “longevity” in an attempt to draw a wider range of customers. The marketing strategy has indeed brought commercial success as of the artisanal produce received great attention and several tons of it were sold within days.



Figure 11. Street vendor implementing symbolic signs as a marketing strategy
(Source: NovostiDny, 2017).

Issues of marketing and self-sufficiency are becoming increasingly dominant within the practice of architects and designers and therefore, spur a whole new way of thinking as to what is the appropriate level of mass culture integration within proposals, as a means of engaging the general public. Skilful use of symbolism, informed through critical analysis of local tradition, can leverage the exoticism of a city located on the Silk Road and establish its position as a heritage centre of global importance (Kantarci, 2007). The considerate practical application of Eastern tradition in architecture and landscape design can improve the quality of parks and gardens through the use of natural material like stone and ceramic as well as vegetation - trees, shrubs and flowers.

The popularity of landmarks is often the direct result of the pure memorability of their physical configuration. For example, the ornaments of the Nazca valley in Peru are commonly recognised for the symbols of birds and spiders. The aim of this article is to collect insight into ancient and contemporary principles of landscape forming and architecture in order to inform the decisions for the future development of Kazakhstan, and other countries on the Silk Road, in terms of design and architecture. The wealth of national art and ornamental tradition in those countries offer a different way of looking at and developing landscape

projects that might potentially gain further recognition in modern occidental society and, in the spirit of the UNESCO initiatives, increase the awareness and tolerance of other cultures.

DESIGN OF RECREATIONAL AREAS, ARBOURS AND PATHWAYS

Recreational areas

Recreational areas of round shapes in parks and gardens can potentially carry additional symbolic meaning. For the Kazakhs the round shape is associated with the layout of the traditional dwelling - the yurt. This form is believed to foster a comfortable ambiance and conditions for calm conversation. In keeping with the zoning of the park, urban furniture can be arranged around the circle to encourage people to sit and have an open conversation. A tortoise ornament, complemented with modular circles would be particularly suitable to place at the very centre of the round space as a symbol of well-being. The choice of materials can include natural flat stones, ceramic tiles and pebbles, yet it is necessary to skilfully combine these materials, emphasising their colour and texture. In order to achieve diversity in the composition of recreational areas, square and polygonal shapes can also be used as intensifiers of the architectural expression.

In homage to national tradition, the use of local materials in the ethnographic gardens is very important, therefore facing stone, brick, cobblestone, pebble and coloured ceramics are good examples of possible choices. Local flat rocks provide a rather solid basis for the development of picturesque compositions. Cobblestone and pebbles are convenient for framing drinking fountains and cascades eluding a sense of plasticity. Pebbles can also be used as a medium for mosaic compositions with symbolic patterns. These compositions can be placed as accents of the recreational areas. Facing bricks are suitable for curbs and various geometric patterns for landscape compositions. These geometric patterns add an exotic flavour to the landscape compositions and attract local population.

Arbours, pavilions and sanctuaries

The arbour is an indispensable attribute of the symbolic garden. In Kazakh tradition, the yurts are often placed in gardens and used as summer gazebos. The Kazakh yurt keeps cool in the summer heat and is a tranquil place for daily pondering or contemplating philosophical questions. At present, there is a rather prominent demand for modern modular arbours. These arbours, as well as yurts, are assembled from light structures, yet retain the main features of ethnographic tradition. Pavilions, pergolas and sanctuaries can also be covered in vegetation such as draught-resistant flowers and vines. Additional vertical landscaping can come in the form of contour walls of the park complementing the garden composition as well as providing shade in the summer heat. Special attention should be dedicated to the small fountains located near the gazebos as the gentle murmur of their water at dusk can have a particularly calming effect. In tea drinking gardens where “samovars” (traditional tea-making devices) are used, their light smoke adds an additional rural feel to the ambiance. The tea itself is considered healing and an activator of philosophical conversations. There is a saying that “wisdom is at the bottom of the bowl” which originates in the Kazakh tea drinking tradition. The locals pour themselves small portions of tea repeatedly and carry out long, fluid conversations. In keeping with folk traditions, fruit trees and shrubs such as drought-resistant



varieties of apple, pear, peach, apricot and grapes would be particularly suitable for symbolic gardens.

Pathways with fragrant flowers and plants

Fragrant plants and flowers such as irises, roses, basil and mint create an additional layer of symbolism with a sacred garden or park. For example, flower beds can be planted along both sides of the alleys thus immersing visitors and passers-by into a fragrant experience of different scents. Special attention should be given to those aromatic avenues as they unfold the distinct theatricality of the landscape. Flowering season, orientation, composition and careful combination of species are of crucial importance for the creation of a pleasant fragrant scene. The colour of the plants in the symbolic gardens and parks should also be carefully considered. Combination of bright colours and ornaments add to the small scale architectural forms of gardens a sense of completeness, monumentality and exotic beauty, thus triggering special attraction. Examples of this style can be found in Turkestan, Samarkand and Bukhara. The combination of ceramic colours, natural stone, textured wood and metalwork add a magical tint to the design and make an allusion to the artisanal landscapes of the Eastern countries. Design colour themes are often based on the season of the year. In Kazakhstan, the traditional ornamental patterns favour autumn and winter tones. Autumn shades of yellow, red, beige, brown and black combined with a winter palette of turquoise, and crimson create a vivid contrast against the white felt of the Kazakh yurt. All these particularities and nuances of colour should be carefully transferred to the elements of design and architecture of the symbolic garden.

Walkways of smooth, winding character are associated with the shape and outline of small rivers. These fluid, natural forms induce tranquillity in visitors and enhance their spiritual connection with nature. Intentional use of sinuous outlines of pedestrian paths in parks can also recreate the same sentiments. For an artistic reorganisation of existing straight paths, it is possible to use symbolic ornaments to naturally integrate them into the surrounding landscape. On the surface of the paths, fragments of zoomorphic ornaments such as cornucopia, tortoise, avian beak, etc. can be used in order to establish a hierarchy and break the paths into segments. These fragments can also be incorporated at rest benches, drinking fountains and intersections between main and minor trails. Modular prints of the ornamental art can also be stamped onto uncompressed concrete surfaces, the traces of the print can then be infilled with tiles, coloured concrete or pebbles. The pedestrian paths themselves can be made of coloured concrete and in this case the ornaments can be articulated using a different colour. If the walkways are framed on both sides by brick curbs, then they can be covered in gravel. In this case, the symbolic ornament is placed in round or square concrete rosettes positioned as per the main design. In nomad tradition, roads bear great significance as they are associated with a journey to the future, therefore, symbols of luck would be particularly suitable in garden walkways.

CONCLUSION

This study has identified a recurring tendency in the use of symbolic ornaments in landscape architecture as in the case of Dubai and Astana. This growing interest in symbolism can be explained as a result of the revival of national arts and a response to the globalisation of world communities. The critical analysis of historic and field materials has revealed common



features and meaning of symbolic ornaments which are characteristic of native nomads as well as peoples from Europe and the Eastern countries.

Through an experimental project proposal, this study establishes a methodology of developing landscape architecture through a vocabulary of symbolic ornamentation in Kazakhstan. Additionally, a practical guide of further design considerations is established to facilitate the planning of parks, gardens, alleys and floral compositions. Symbolism refers back to intrinsic human values and aspirations and is thus recognised in the architectural expression both of eastern and occidental cultures albeit in different forms. The universal value of wishes for mutual understanding, benevolence, good luck and prosperity reverberates through time and brings cultures together in an age of rapid economic development.

Listed below are five design guidelines for landscape projects with symbolic meaning:

- **Symbols of good fortune** - every culture manifests symbols of good fortune in its ornamental art: the tree signifying life, the cube - equality and strength of society, birds - good news and peace. Throughout time mankind has always forged its conventions of reassurance and hope for the future. These wishes of health and prosperity strive to uplift the human spirit in times of hardship and encourage it along the small battles of every day. Hence, the creative endeavours of architects and planners expressed through architectural and landscape design should also strive to fulfil the ultimate goal of a healthy and prosperous modern society.
- **Plasticity of ornamental art** - ornamental patterns are an essential design element of landscape architecture as they are effortlessly integrated in existing terrains as its natural continuation. Inspired by nature in the first place, ornamental elements remain part of the vocabulary of geographic language and fit seamlessly into the contours of its terrains. The malleable qualities of the very earth are reflected in the smooth, fluid outlines of ornamental elements and their application in landscape design reinforces the natural perception of gardens and parks.
- **Eastern charm as a hallmark of ornamental landscape design** - appropriate colour schemes are achieved through a careful consideration of local tradition and mindful selection of building materials so that there is an overall cohesion of the overall landscape. Warm coloured natural stones, ceramic tiles and intricate patterns come together to pay tribute to an eastern exotic typical of the exterior and interior public spaces of Turkestan, Samarkand and Bukhara.
- **Clarity of expression** - the simplicity and instant comprehension of the compositions is achieved through the use of natural symbolic forms (trees, birds, flowers). The concise silhouettes of those elements make them easy to understand and remember. Compositional unity and artistic originality in the use of symbolic elements are key to a successful landscape design.
- **Small scale modular design** - the human scale approach to design outlined in Le Corbusier's Modulor is a good starting point for the design of landscape elements such as flower beds, water fountains and furniture. The main driver of design concepts for small scale modular compositions and their adaptation to local conditions should always be the end user.



Typical design features of gardens and parks with symbolic meaning are presented in the table below:

Table 2: Features of the design in gardens and parks with symbolic meaning (Source: Authors, 2017).

Design Feature	Inspiration/ Tradition	Possible Application
<p>1 <u>Metropolitan to urban scale:</u></p> <p>Symbols of wide ethnic cultural tradition</p> <p>e.g. entertainment complex in the form of a palm tree in Dubai, the sun-headed man in the park "Aray", Astana</p>	<p>Geoglyphs and Petroglyphs</p>	<p>Urban or rural cultural recreation park</p>
<p>2 <u>Urban to local scale:</u></p> <p>Expression of ornamental art and tradition</p> <p>e.g. the technopark of South Kazakhstan State University, the cornucopia of "Manas of Ail" in Bishkek</p>	<p>Traditional Kazakh dwellings -the yurt, ornamental art - "Koshkar muiz", "Kus mury", "Tasbaka", etc</p>	<p>Recreational areas, arbours, pathways, alleys, public parks, gardens and courtyard</p>
<p>3 <u>Local to human scale:</u></p> <p>Modular compositions of small symbolic ornamentation</p> <p>e.g. arbours, flower beds and compositions</p>	<p>Traditional ornamental patterns (and Le Corbusier's Modulor)</p>	<p>Flower beds, drinking fountains and urban furniture</p>

In ancient times, ornaments were considered to carry magical power. Across millennia, they were used to communicate wisdom, rich cultural memories and traditions in a visual form. The exact interpretation of those relics varies between experts and analysts, yet the essence of the ancient messages remains the same. Cultural tradition, understanding and views of the world of the natives should be the starting point of each attempt for analysis. What distinguishes design proposals based on symbolic principles is the sharp logic, simplicity of concept and clarity of thought. Although symbolic gardens might share similarities with the Islamic gardens, they are distinguished in their use of symbolism originating from ancient geoglyphs and petroglyphs. The use of ancient symbolic ornaments enriches the composition of landscape architecture endowing it with deeper meaning and contributing to its elaborate architectural expression as part of a culturally rich urban environment.

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